a motor attached to said proximal end of said catheter for imparting motion to said catheter.

Please cancel Claim 15.

16. (Once Amended) A thrombolytic device for use with a pharmacological agent comprising:

a catheter having a catheter wall, a proximal end, a distal end, and at least one lumen;

a motor attached to said proximal end of said catheter for imparting motion to said catheter;

a pharmacological delivery conduit with a first end and a second end, said first end operatively connected to said lumen at said proximal end of said catheter;

a pump for delivering a pharmacological agent, said pump operatively connected to said second end of said conduit.

Please cancel Claim 18.

19. (Once Amended) A thrombolytic device as in claim 16, further comprising an occlusion mechanism selected from the group consisting of a inflatable balloon, a deformable mesh braid with a membrane, and a malecot with a membrane, said occlusion mechanism operatively associated with said catheter.

20. (Once Amended) A pharmomechanical device, comprising:

means to increase the surface area of a clot in a vascular structure such that said clot can be dissolved by a lytic agent; and

means for providing mechanical action throughout a length of a vessel for a prolonged period of time while said lytic agent is acting, said mechanical means comprising a corkscrew catheter configuration substantially incapable of damaging an endothelium of said vascular structure.

31. (Once Amended) A method for ameliorating a clot in a patient's blood vessel, comprising:

administering to a patient an amount of contrast medium to determine the extent of a thrombus in the patient's blood vessel;

selecting a catheter having an appropriate length segment, said length segment having a mechanically active portion and an aperture-containing portion, said step of selecting conducted so that said length segment spans the entire length of a clot contained within said patient's blood vessel;

inserting a catheter into said patient's blood vessel;

deploying a distal occlusion element to reduce undesired passage of a thrombolytic drug from said blood vessel;

programming a motor controller to obtain desired periods of activation and inactivation;

intermittently activating said mechanically active segment to remove said clot from said blood stream;

infusing a desired thrombolytic agent through said catheter substantially simultaneously with said step of activating said mechanical segment; and

observing the patient in a location remote from the patient during at least one of said steps of intermittedly activating and infusing.

Please add the following new claims:

32. (Added) A method for ameliorating a clot in a patient's blood vessel as set forth in Claim 31, wherein said step of intermittently activating said mechanically active

segment is accomplished by activating an infusion pump which delivers said thrombolytic agent.

33. (Added) The method as set forth in Claim 31, further comprising monitoring said thrombolysis over a period of time extending from at least 20 minutes after said step of inserting.

34. (Added) A thrombolytic device comprising:

a catheter having a proximal end, an elongated mid-section and a distal end, said distal end comprising a deformable mesh braid having interstitial spaces therein, and a membrane disposed in said interstitial spaces, said distal end operatively associated with a movable core guide wire that is movable between an extended and a retracted position, wherein when said core guide wire is in said retracted position, said mesh braid is deformed into an expanded disk-like structure so as to occlude a vessel through which said catheter is inserted;

a means for repeatedly rotating said catheter within said vessel in a manner such that said catheter contacts a clot within said vessel and said clot is disrupted by said rotating.

35 (Added) The catheter as set forth in Claim 33, wherein said catheter is rotatable about said core wire.

36. (Added) The device as set forth in Claim 34, wherein at least said mid-section of said catheter has a plurality of apertures extending therethrough.

37. (Added) A method to perform long segment thrombolysis comprising:

(a) performing an interventional procedure on a patient in order to place a device comprising a catheter having a proximal end, an elongated mid-section and a distal end, said distal end comprising a deformable mesh braid having interstitial spaces therein,

and a membrane disposed in said interstitial spaces, said distal end operatively associated with a movable core guide wire that is movable between an extended and a retracted position, wherein when said core guide wire is in said retracted position, said mesh braid is deformed into an expanded disk-like structure so as to occlude the lumen of a vessel through which said catheter is inserted, said catheter having a plurality of apertures therethrough to facilitate the delivery of thrombolytic agents;

(b) infusing through said catheter a desired thrombolytic agent;

(c) performing mechanical disruption of a blockage in a vascular lumen by repeatedly rotating said catheter at a rotational speed of less than about 55 RPMs;

(d) maintaining said device within said patient for at least one hour; and

(e) removing said device from said patient.

38. (Added) A thrombolytic device comprising a first mechanically active segment and a second aperture containing segment, said first and second segments spanning an entire length of a clot contained within a patient's vessel, said first segment operatively associated with a drive motor so as to rotate said first and second segments, said second segment being operatively associated with an infusion pump through which a thrombolytic agent is conveyed.

39. (Added) The method as set forth in Claim 37, wherein said catheter is rotated in both clockwise and counter-clockwise directions.

40. (Added) The device as set forth in Claim 34, wherein said catheter has a serpentine configuration.

41. (Added) The device as set forth in Claim 20, wherein an intermittent motion of the catheter is provided by a pump that delivers a lytic agent in programmable pulses.

42. (Added) The device as set forth in Claim 41, wherein a frequency and a duration of said pulses are programmable.

43. (Added) The device as set forth in Claim 34, wherein said catheter rotates at less than about 200 RPMs.

44. (Added) The device as set forth in Claim 34, wherein said catheter rotates at less than about 55 RPMs.

45. (Added) The method as set forth in Claim 31, wherein said step of intermittently activating comprises operation of said mechanically active segment for about 2 seconds and then remaining inactive for about 5 minutes.

46. (Added) The method as set forth in Claim 31, wherein said step of infusing is repeatedly performed with a time interval between individual infusions being at least 5 minutes apart.

47. (Added) The method as set forth in Claim 31, wherein said step of infusing is repeatedly performed with a time interval between individual infusions being at least 15 minutes apart.

48. (Added) The method as set forth in Claim 31, wherein said step of infusing is repeatedly performed with a time interval between individual infusions being at least 30 minutes apart.

49. (Added) The method as set forth in Claim 31, wherein said intermittently activating step comprises mechanical action for between about .1 second and 60 seconds and a period of inactivation of more than 5 seconds and up to about 20 minutes.

50. (Added) A method for treating a clot in a patient's vessel, comprising:

inserting a catheter into a patient's blood vessel;

occluding a desired portion of said patient's blood vessel to reduce undesired passage of a lytic agent beyond a desired position along said vessel;

infusing said catheter with a lytic agent;

providing a gentle mechanical rotation of said catheter at a speed of less than about 55 RPMs;

intermittently ceasing mechanical rotation of said catheter for a time period of at least about 3 minutes and providing mechanical action of said catheter thereafter in time intervals of at least about 3 seconds.

51. (Added) The method as set forth in Claim 50, wherein said step of intermittently ceasing mechanical rotation is controlled using a programmable controller.

52. (Added) The method as set forth in Claim 31, wherein said step of intermittently activating comprises rotating said catheter at between about 1 and 300 times per minute.

53. (Added) The device as set forth in Claim 16, wherein said catheter has apertures provided therein along a length of from 20 to 60 cm as measured from said distal end.

54. (Added) The method as set forth in Claim 31, wherein said step of intermittently activating comprises movement of the catheter, said movement selected from the group consisting of a longitudinal wave-like motion and an axial rotation motion.

55. (Added) The method as set forth in Claim 31, further comprising the step of monitoring said method during said step of infusing.